

## REMARKS

This amendment is responsive to the Final Office Action that was mailed March 7, 2007 (hereinafter "Final Office Action").

### Amendments To The Claims

Claim 1 has been further amended to incorporate the limitations of claim 2. No new matter is introduced by these amendments.

### Claim Rejections Under 35 U.S.C. §103(a)

Claim 1-3 and 5-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Mandelik et al. (U.S. Patent No. 3,771,261)("Mandelik") in view of Buswell et al. (U.S. Patent No. 5,360,679)("Buswell").

The present invention is directed to an integrated fuel processor for steam reforming a diesel hydrocarbon fuel. Paragraph 0008. The integrated fuel processor of the present invention includes a desulfurization unit for reducing the sulfur content of the diesel hydrocarbon fuel. Paragraph 0008. In addition, the steam reformer of the integrated fuel processor of the present invention includes a carbon dioxide fixing material. Paragraph 0008.

With this amendment, claim 2 has been cancelled. The limitations of claim 2 have been incorporated into amended claim 1. Amended claim 1 recites a fuel processor for steam reforming a sulfur-containing hydrocarbon fuel, the processor comprising the following elements: (1) a desulphurization unit for reducing the sulfur content of a diesel hydrocarbon fuel; (2) a pre-reformer for catalytically converting a reduced-sulfur hydrocarbon fuel to a mixture of C<sub>1</sub> and C<sub>2</sub> hydrocarbons; (3) a steam reformer for reforming the mixture of C<sub>1</sub> and C<sub>2</sub> hydrocarbons at a steam reforming temperature to a reformat comprising hydrogen and carbon dioxide, the steam reformer having a catalyst bed comprising a carbon dioxide fixing material for fixing at least a portion of the carbon dioxide in the reformat; and (4) a condenser downstream of the steam reformer for removing water from the reformat.

The combination of Mandelik and Buswell does not contain all of the elements of amended claim 1. Specifically, the combination of Mandelik and Buswell fails to teach or suggest a diesel hydrocarbon fuel. In fact, there is no

mention of a diesel hydrocarbon fuel in either Mandelik or Buswell. With respect to the identification of the hydrocarbon fuel as diesel, the Examiner states that pursuant to MPEP 2115, the material worked upon (diesel) does not limit the apparatus claims. Final Office Action, p. 3. However, in the present invention the apparatus in question is defined not only with respect to its structure, but with respect to its intended function as well. Amended claim 1 defines the function, namely diesel fuel processing, as well as the structure of the diesel fuel processor. The Federal Circuit provides that functional limitations are appropriate and should be considered in determining anticipation. *In re Atwood*, 354 F.2d 365, 148 U.S.P.Q. 203, 210. As a result, diesel does limit amended claim 1. Reconsideration and withdrawal of this rejection is respectfully requested.

Claim 10 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Mandelik et al., U.S. Patent No. 3,771,261, in view of Sechrist et al., U.S. Patent No. 5,965,473. Claim 10 is believed to be in condition for allowance by virtue of its dependency from amended claim 1. Reconsideration and withdrawal of this rejection is respectfully requested.

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All of the stated grounds of objection and rejection are believed to have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

  
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